journals, have received but little of that attention in our journals which their novelty and importance demand.

Note.—Dr. Hall, at the suggestion of a friend, has called his the *ready method.* Would not the *physiological method* be a more scientific, and equally appropriate term, in contradistinction to the unscientific and empirical methods hitherto employed and still in vogue?

ART. VI.—*Extirpation of the Entire Clavicle.* By CHARLES R. S. CURTIS, M. D., Chief Surgeon to the North-western Eye Infirmary and Orthopædic Institution, Chicago.

ELIZABETH B——, aged 20, consulted me, about the 20th November, 1856, in regard to certain tumours existing on her neck and wrist. On examination, the tumour on her wrist was found to have a base about the size of a dollar, of an oval shape, and projecting about half an inch above the surface. It was situated on the anterior and internal side of the right wrist-joint, lying over the styloid process of the radius, the scaphoid, the trapezium, and the base of the metacarpal bone of the thumb. It was hard, almost cartilaginous, vascular, and exceedingly sensitive—the least touch causing acute pain. It was so firmly united to the deep tissues, that we could not determine whether the bones were involved.

This tumour first made its appearance when she was quite a child. She first remembers it as a small red excrescence, about the size of a pea. From this it gradually enlarged, until about four years ago, when it had attained the size of a hickory-nut. At this time it was excised by Dr. Cole, of Detroit. The operation, however, did not prove successful, as the tumour immediately began to reappear, and, at the end of a year, was again excised by the same surgeon; no portion of bone being removed during either of the operations. This operation, also, proved unsuccessful; and, about one year from the time of its performance, she had it *burnt* out with caustic of some kind, by a physician of the above named city, whose name I was unable to ascertain. This, again, was followed by a return and another removal by caustic at the expiration of another year. During all this time, the base of the tumour had been constantly growing larger, and about one year after the date of the last cauterization, she presented herself to me—the tumour appearing as I before described. The lymphatic glands in the course of the arm and axilla have at times been sore and enlarged.

About five years ago, she discovered a soreness at the middle of the subcutaneous surface of the clavicle, and soon after detected a slight enlargement at that point, which increased very slowly until within the last three months, during which time it has been growing much more rapidly, in fact enlarging nearly one-half. Pain has not been very great, but still there has been a constant soreness, slightly increased on pressure, *but not aggravated at night.* During the last three months, the pain and tenderness have been greatly increased. On examination, I found the tumour about the size of an egg, hard and unyielding, and exceedingly sensitive—the slightest pressure producing great pain. The crackling sensation, spoken of by authors, I was unable to

detect, though my friend, Dr. H. M. Kirke, thought he observed it. The soft parts above and below the clavicle were somewhat sensitive and painful under pressure, but not swollen. The lymphatic glands were not enlarged.

The patient was of full habit, sanguineo-lymphatic temperament, and has always enjoyed excellent health, *with the exception* of her having contracted syphilis about the time of the first appearance of the clavicular tumour. The syphilitic affection was entirely cured, and she has never had the slightest evidence of constitutional impregnation since. Her mother and one sister died of phthisis. No malignant disease is traceable in the family.

My first impression in regard to the clavicular tumour was, that it was simply an ordinary syphilitic node. But a careful examination of the history and general appearance of the case soon convinced me, as it did every physician who examined it, that we had a malignant disease to deal with throughout. An operation was accordingly advised. It was deemed expedient, in order the more effectually to secure her from a return of the disease, to remove both tumours at one time; and lest, by operating on the original tumour last, we might disturb the dressings of the clavicular wound, it was determined to dispose of that tumour first; and, accordingly on the 29th November, my friend, Dr. Kirke (the patient being thoroughly anæsthetized) proceeded to remove it.

The tumour was circumscribed by an incision through the healthy tissue, and removed with the fascia that participated in the disease. It was intimately connected with the deep fascia of the forearm and a small portion of the annular ligament; also with the sheaths of the tendons of the flexor carpi radialis and flexor longus pollicis. The radial artery was not divided. Hemorrhage was inconsiderable. The bones did not seem to be involved, and the wound was allowed to heal, by granulation, under the cerate dressing.

The patient being once more brought under the influence of chloroform, and placed on her back with the shoulders somewhat elevated, so as to depress the head and extend the platysma myoides, I made an incision about one inch above the clavicle, from the median line of the neck to a point a little beyond the anterior border of the trapezius, through the skin and superficial fascia. A second incision, parallel to this, was then made about one inch below the clavicle of the same length. These were united by a perpendicular incision in the form of the letter H. The flaps were now dissected back, exposing the lower portion of the platysma myoides. This muscle was carefully divided above and below from its clavicular attachments. It seemed to have lost its identity immediately over the tumour, apparently from chronic inflammatory action. The sterno-cleido mastoideus was now separated from its clavicular origin, by shaving the bone with the point of the scalpel. The trapezius, deltoid and pectoralis major were in a similar manner separated from the bone. It was found that the periosteum over the extremities of the bone was healthy, and, in order to favour the development of a useful callus, those portions of it were allowed to remain. The bone, being accurately dissected from its membranes at these points, an attempt was made to disarticulate it at its sternal end. This extremity being preferred in opposition to the method adopted by Drs. Mott and Warren, from the fact that after elevating it, in dissecting from the cardiac side of the vessels, there would be less danger of dividing them, and if divided, the ligature could be applied with greater facility. It was discovered, however, that the posterior portion of the orbicular ligament could not be incised without endangering important bloodvessels, and accordingly a different plan of procedure was adopted. About three-quarters of an inch from its sternal extremity, the bone was cut almost through

by means of a Hey's saw; the soft parts being carefully protected by the fingers of an assistant. A strong pair of bone forceps was now applied, and the division easily completed. A piece of tape was then passed beneath, and the bone elevated. I then proceeded to dissect the bone and tumour from their attachments. The soft parts were somewhat adherent, and exceedingly vascular over and around the tumour, and the blood flowed in a stream from every incision into it. Great care was taken, during the whole operation, to remove every portion of tissue that seemed to be in an unhealthy condition. As the posterior portion of the tumour lay immediately over the subclavian vessels, this dissection required, in its performance, a vast amount of caution. But, when we had passed beyond the tumour, the difficulties and dangers were greatly diminished; and the disarticulation of the acromial extremity was effected with comparative ease. But the sternal fragment was still remaining, and here the orbicular ligament presented some obstacles—owing to its close proximity to important bloodvessels, together with a slight peculiarity in that articulation—but by cautious dissection was finally divided, and the last portion of bone removed.

Not one of the large vessels was divided, although during the latter part of the operation the patient was restless and uneasy, from the fact that disagreeable symptoms compelled us to suspend the use of the anæsthetic. Hemorrhage was not very great, only two ligatures being required. The flaps were brought over and united by interrupted suture and adhesive straps. The arm and shoulder were supported by *Fox's Apparatus*, and the wound dressed with tepid water. The operation and dressing required nearly three hours. The patient was greatly exhausted, and fell asleep before the dressing was completed, not even waking when the stitches were passed.

During the whole time I was ably assisted by distinguished medical gentlemen of this city, and my obligations are especially due to Dr. H. M. Kirke, Dr. Wm. Narian, Dr. J. C. Thorp, and Dr. Banks.

The patient was placed in bed and ordered the following sedative diaphoretic mixture: ℞.—Liq. pot. cit., spts. mindereri, āā ℥ij; aq. camph. ℥j; morph. acetas gr. iv; antimon. et potass. tart. gr. j. S.—A tablespoonful every hour. But on account of the extreme sedation, it was discontinued and stimulants given. This sedation was evidently caused by the anæsthetic, of which ℥vj of chloroform was used. The stimulation was maintained until the evening of the second day—an assistant remaining by the patient's side until reaction was fully established. On the morning of the 3d December, the dressings were removed for the first time. Owing to the extreme mobility of the part, and the impossibility of keeping it at perfect rest, the wound, though looking healthy and suppurating finely, presented no points of union by the first intention. The stitches were removed, and the adhesive straps reapplied. The tepid water dressing was used throughout the convalescence. On the seventh day, she was sitting up, and the day following left her room, though she did not leave the house until the eighteenth day, when she presented herself at the office a mile and a half from her residence. She improved rapidly, and on the 30th December was discharged cured. The periosteum that had been left having thrown out considerable ossific matter; by the aid of a shoulder brace nearly all of the movements of the arm are accomplished, and the member is increasing in strength daily. The humour involved the outer portion of the sternal extremity and middle third of the clavicle, and presented every evidence of osteo-sarcoma. Unfortunately we had not the facilities for subjecting it to a microscopical examination.

June 7, 1857. Since the preceding was written, and about two months after cicatrization was completed, she began to complain of sharp, lancinating pains shooting up from the wrist to the shoulder. The cicatrices began to be sensitive with pain and tenderness on pressure. These symptoms gradually increased until the 14th of May last, when I find the following entry in my note-book: "Was called to see Lizzie B——; found her suffering great pain in wrist and neck, also along sternum; great tenderness on pressure over sternum, but no swelling. Auscultation reveals nothing unnatural. The wrist somewhat swollen, and has, on one or two occasions, bled profusely. The clavicular space continues to contract. Complains of choking sensations; pain in the head; constipation, &c. Ordered a mercurial.

"16*th*. Wrist and neck the same, other symptoms much improved."

It is now apparent, and indeed has been for some time, that a reproduction of the disease has taken place. I called on her to-day. The pain and tenderness have increased but little since the 14th of May. She is suffering again with torpidity of the bowels, pain in the head, nausea, &c., which were prescribed for as before.

Among the peculiarities of this case may be noted the rapid recovery from the operation, the slow and insidious course which the disease has pursued throughout, and its unfailing reproduction.

Art. VII.—*Smallpox and its Varieties.* By A. W. McDowell, M. D., of Bedminster, Somerset County, New Jersey.

The question of vaccination, and its protective powers, has much agitated the profession. A large number contend that it ought frequently to be repeated. It is the duty of all of us to furnish such facts as may have fallen under our observation, and then to let the profession judge for themselves.

Case I.—On the 20th of February, 1848, I was called to see James H., a young gentleman from New York, on a visit to his relations, who reside in the country. When I first saw him, he was complaining of a pain in his head, and had much nausea, which he thought was owing to a foul stomach, as riding in the cars had often affected him in such a manner. I prescribed an emetic of antimony and ipecacuanha, which relieved some of the symptoms, but he still complained much of his head. I left him a dose of calomel, to be taken in the morning, to be followed by Epsom salts. When this operated, his head seemed relieved; but as his stomach still continued much disordered, and there was much fever, I gave him an effervescing mixture and sweet spirits of nitre.

About the second day some vesicles began to appear upon his face and body. They came on gradually until there was a dozen upon his face. They were *conoidal*, with an inflamed border. On the second day they contained a pale yellowish fluid. About the fourth day some commenced scabbing, and left permanent marks. They *never* flattened. On the ninth day he was worse, and had secondary fever. At this time I had much chicken-pox in my practice, and pronounced this a case of the same kind; but I was much mistaken, as the sequel will show. It was a case of genuine varioloid.